

Notice of Allowability

Application No.

10/687,355

Examiner

Curtis B. Odom

Applicant(s)

KIM ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt filed on 4/30/2007.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Eric Hyman on June 7, 2007.

The application has been amended as follows:

In claim 8, lines 1-2, the phrase "The AGC device of claim 7, wherein the energy E output by the subtractor" is changed to "The AGC device of claim 7, wherein the energy *Energy* output by the first subtractor".

In claim 9, line 1, the phrase "The AGC device of claim 1, further comprising a dB" is changed to "The AGC device of claim 1, further comprising a decibel (dB)".

In claim 10, lines 5-7, the phrase "a D/A (digital-to-analog) converter for converting an output of the second subtractor into a digital signal, and outputting the digital signal to the RF unit" is changed to "a D/A (digital-to-analog) converter for converting an output of the second subtractor into an analog signal, and outputting the analog signal to the RF unit".

In claim 15, lines 1-3, the phrase “In an AGC (automatic gain control) method in an OFDM (orthogonal frequency division multiplexing) system, a recording medium including a program comprising:” is changed to “An AGC (automatic gain control) in an OFDM (orthogonal frequency division multiplexing) system including a computer readable recording medium encoded with a program, which when executed performs the steps of:”

EXAMINER'S STATEMENTS OF REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: Claims 1-10 are allowable over prior art references because related references do not disclose an automatic gain control which calculates an energy and accumulates the energy output by a unit for controlling the gain of an input signal, wherein the mean value is taken of the accumulated energy; accumulating the input signal and taking a mean value of the energy of the accumulation to create a DC offset, wherein the DC offset is subtracted from the mean value of the accumulated energy output from the unit for controlling the gain. A reference value is then subtracted from the DC offset cancelled signal and the result is fed back to the unit for controlling the gain of the input signal. Claims 11-15 are allowable over prior art references because related references do not disclose performing a coarse automatic gain control in a short training interval by subtracting a DC offset signal from an input signal, wherein the DC offset is an accumulated mean value of the input signal; and performing fine automatic gain control in a long training sequence interval

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by subtracting the energy of the DC offset from the energy of the input signal and using the energy of the DC offset signal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shinno et al. (U. S. Patent No. 5, 946, 607) discloses an automatic gain control system.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'C. Odom', with a long horizontal flourish extending to the right.

Curtis Odom

June 9, 2007